REMARKS

SUMMARY

Reconsideration of the application is respectfully requested.

Claims 1, 3, 5-10, 12-18, 20-22, 31-33, 35-40, and 42-44 were rejected by the Examiner. In response, Applicants now amend claims 1, 6, 7, 16, 31, and 38, and cancel claims 5, 18, and 40. Accordingly, claims 1, 3, 6-10, 12-17, 20-22, 31-33, 35-39, and 42-44 remain pending in the Application.

Applicants thank the Examiner for withdrawing the provisional double patenting rejection under application serial number 10/082,807. Applicants also thank the Examiner for withdrawing the §102 rejection of claims 1, 4, 10, 38, 39, and 44.

DOUBLE-PATENTING

In "Double Patenting" item 7 on page 3 of the above-identified Office Action, claims 1, 3, 5-10, 12-18, 20-22, 31-33, 35-40, and 42-44 have been provisionally rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claim 1-8, 19-23, 26, 27, 31-36, 38, 39, 43, and 44 of copending Application No. 10/784,492 (hereinafter '492) which was filed after the instant application.

Applicants will, upon issuance of either '492 or the instant application, submit the necessary Terminal Disclaimer for the remaining application. Thus, there will be no double patenting.

CLAIM REJECTIONS UNDER 35 U.S.C-. § 112

In "Claim Rejections – 35 USC § 112," item 9 on page 5 of the above-identified Office Action, claims 1, 3, 5-10, and 12-15 have been rejected as being indefinite under §112, second paragraph. More particularly, the Examiner notes that the element "the web service logic" recited in lines 11-12 of claim 1 lacks antecedent basis.

In response, Applicants have amended claim 1, obviating the rejection. The amended recitation of "the represented portion of web service logic" finds antecedent support in lines 3-4 of claim 1. Accordingly, Applicants respectfully submit that amended claim 1, and consequently dependent claims 3, 6-10, and 12-15 are patentable under §112, second paragraph.

CLAIM REJECTIONS UNDER 35 U.S.C-. § 103

1. In "Claim Rejections – 35 USC § 103," item 12 on page 6 of the above-identified Office Action, claims 1, 10, 16, 22, 31, 38, and 44 have been rejected as being unpatentable over "Using WebLogic Enterprise JavaBeans" by BEA Systems (hereinafter "WebLogic") in view of U.S. Patent Publication Number 2003/0014733 to *Ringseth et al.* (hereinafter "Ringseth") under 35 U.S.C. § 103(a).

Amended claim 1 teaches a "method of specifying a stateful web service comprising:

first facilitating, by an integrated development environment of a computing device, a user in providing a source code representation of at least a portion of web service logic, the logic including one or more methods;

second facilitating, by the integrated development environment of the computing device, the user in identifying one of said one or more methods to be exposed as part of the stateful web service; and

in response to user input, automatically specifying, by the integrated development environment of the computing device, one or more declarative annotations within the source code representation, the declarative annotations, when recognized by a compiler through analysis of the represented portion of web service logic which includes the declarative annotations, causing the compiler to generate one

or more persistent components to maintain conversational state related to the identified method;

wherein the one or more declarative annotations indicate to the compiler whether the identified method is at least one of a start method, a continue method, or a finish method, wherein the start method applies to start of a stateful conversation between a client and the web service, the continue method applies to continuation of an ongoing stateful conversation between a client and the web service, and the finish method applies to completion of an ongoing stateful conversation between a client and the web service."

In rejecting claim 1, the Examiner again pointed to numerous sections of WebLogic, those sections discussed in depth with respect to the elements of claim 1 in prior responses. WebLogic simply teaches a method for specifying, by a developer, a conventional EJBean and deployment descriptor which may serve as a stateful component of a web service. In prior rejections, the Examiner equated the deployment descriptor to the declarative annotations of claim 1. In response, Applicant previously amended claim 1 to indicate that the annotations were specified within the WebLogic, thus distinguishing over WebLogic, in which the deployment descriptors are found in an external file. In response to that amendment, the Examiner now cites Ringseth as curing the deficiencies of WebLogic. Ringseth teaches that a developer may specify declarative annotations, in the form of Visual C++ attributes, within web service source code, the attributes to be recognized by a compiler as specifying objects for handling SOAP messages.

In response to the Examiner's rejection, Applicants have amended claim 1 to include the recitations of claim 5, including: "wherein the one or more declarative annotations indicate to the compiler whether the identified method is at least one of a start method, a continue method, or a finish method..."

In the above-identified Office Action, the Examiner rejected claim 5 as being unpatentable over WebLogic, Ringseth, and "Enterprise JavaBeans" by Monson-Haefel (hereinafter "Monson-Haefel"), that rejection dealt with further herein. Monson-Haefel is a

text on Enterprise JavaBeans. In Part 7.4 of that text, Monson-Haefel discusses the life-cycle of a stateful session bean. Monson-Haefel notes that a stateful bean may have three states: does not exist, method-ready, and passivated. To instantiate a bean and enter a method-ready state, a client may invoke a create() method of a bean. The Examiner equates the create() method to a start method. The Examiner also cites ejbActive() and ejbRemove() as continue and finish methods, respectively. Because the start, etc. method of amended claim 1 is the "identified method" (i.e., the method belonging to the source code representation of the at least a portion of web service logic recited by claim 1), the Examiner is implictly equating the bean logic to which the create(), etc. methods belong to the source code representation. This is consistent with current and previous rejections of claim 1, in which the Examiner reads the bean logic of WebLogic on the source code representation.

But even assuming that bean logic is capable of reading on the source code representation and that create(), etc. is capable of reading on the identified start, etc. method (points which Applicants do not concede), WebLogic, Ringseth, and Monson-Haefel simply do not teach or suggest that the create(), etc. methods are indicated to a compiler as start, etc. methods by declarative annotations, as recited by amended claim 1. While Ringseth does describe declarative annotations, those annotations simply instruct a compiler as to the SOAP message handling capabilities desired for web service logic. They do not "indicate to the compiler whether the identified method is at least one of a start method ... wherein the start method applies to start of a stateful conversation between a client and the web service." Further, there is no suggestion in WebLogic, Ringseth, and Monson-Haefel to extend the declarative annotations of Ringseth to the create(), etc. methods of the bean logic of Monson-Haefel. In fact, WebLogic, Ringseth, and Monson-Haefel arguably teach away from the need to identify the create(), etc. methods to a compiler since the mere act of compiling the methods and bean logic will result in the desired bean to maintain state. In amended claim 1, in contrast, the identified method is indicated to be a start, etc. method precisely because compiling the method and the logic alone (i.e., without declarative annotations) will not result in the persistent component of claim 1 to maintain state. Thus, by teaching a method to actually instantiate a persistent component (i.e., bean), WebLogic, Ringseth, and Monson-Haefel teach away from the need for the declarative annotations to indicate to a compiler that

a method is a start method, the annotations causing the compiler to create a persistent component.

Accordingly, amended claim 1 is patentable over WebLogic, Ringseth, and Monson-Haefel under §103.

Claims 16, 31, and 38 recite limitations similar to those of claim 1. Accordingly, claims 16, 31, and 38 are patentable over WebLogic, Ringseth, and Monson-Haefel for at least the same reasons.

Claims 10, 22, and 44 depend from amended claims 1, 16, and 38, incorporating their limitations, respectively. Acordingly, for at least the same reasons, claims 10, 22, and 44 are patentable over WebLogic, Ringseth, and Monson-Haefel under §103.

2. In "Claim Rejections – 35 USC § 103," item 13 on page 13 of the above-identified Office Action, claims 3 and 33 have been rejected as being unpatentable over WebLogic and Ringseth as applied to claim 1 above, and further in view of "EJBDoclet," December 21, 2000, by dreamBean Software (hereinafter "EJBDoclet").

EJBDoclet is proffered for the teaching of "the one or more declarative annotations are specified within a comment field preceding the identified method". EJBDoclet does not cure the deficiencies of WebLogic and Ringseth. Accordingly, claims 1 and 31 remain patentable over WebLogic, Ringseth, and EJBDoclet, alone or in combination, for at least the reasons given above. Claims 3 and 33 depend from claims 1 and 31, incorporating their limitations. Accordingly, claims 3 and 33 are patentable over WebLogic, Ringseth, and EJBDoclet, alone or in combination, under §103(a).

3. In "Claim Rejections – 35 USC § 103," item 14 on page 14 of the above-identified final Office Action, claims 5-8, 18, and 40 have been rejected as being unpatentable over WebLogic and Ringseth as applied to claims 1 above, and further in view of Monson-Haefel.

The rejections of claims 5, 18, and 40 are obviated by their cancellations.

As discussed above, Monson-Haefel was proffered for the teachings of "wherein the one or more declarative annotations indicate to the compiler whether the identified method is at least one of a start method, a continue method, or a finish method, wherein the start method applies to start of a stateful conversation between a client and the web service, the continue method applies to continuation of an ongoing stateful conversation between a client and the web service, and the finish method applies to completion of an ongoing stateful conversation between a client and the web service". Mon-Haefel does not cure the deficiencies of WebLogic and Ringseth. Accordingly, claim 1 remains patentable over WebLogic Ringseth, and Monson-Haefel, alone or in combination, for at least the reasons given above. Claims 6-8 depend from claim 1 incorporating its limitations. Accordingly, claims 6-8 are patentable over WebLogic, Ringseth, and Monson-Haefel, alone or in combination, under §103(a).

4. In "Claim Rejections – 35 USC § 103," item 15 on page 16 of the above-identified final Office Action, claims 9, 17, and 39 have been rejected as being unpatentable over WebLogic and Ringseth as applied to claims 1 above, and further in view of prior art of record U.S. Patent 5,812,768 to Pagé, et al. (hereinafter "Pagé").

Pagé was proffered for the teachings of "wherein the one or more declarative annotations indicate to the compiler whether the identified method is buffered, wherein if the identified method is buffered the compiler instantiates one or more queues to temporarily store one or more requests for the identified method". Pagé does not cure the deficiencies of WebLogic and Ringseth. Accordingly, claims 1, 16, and 38 remain patentable over WebLogic, Ringseth, and Pagé, alone or in combination, for at least the reasons given above. Claims 9, 17, and 39 depend from claims 1, 16, and 38, respectively, incorporating their limitations. Accordingly, claims 9, 17, and 39 are patentable over WebLogic, Ringseth, and Pagé, alone or in combination, under §103(a).

5. In "Claim Rejections – 35 USC § 103," item 16 on page 17 and item 20 on page 19 of the above-identified Office Action, claims 12, 32, and 33 have been rejected as being unpatentble over WebLogic and Ringseth, as applied to claims 1 and 31 above, and further in view of U.S. Patent 6,230,160 to Chan, et al. (hereinafter "Chan").

Chan was proffered for the teachings of "wherein said user input includes graphical manipulation of the identified method by the user via the integrated development environment". Chan does not cure the deficiences of WebLogic and Ringseth. Accordingly, claims 1 and 31 remains patentable over WebLogic, Ringseth, and Chan, alone or in combination, for at least the reasons given above. Claims 12, 32, and 33 depend from claims 1 and 31, incorporating their limitations. Accordingly, claim 12, 32, and 33 are patentable over WebLogic, Ringseth, and Chan, alone or in combination, under §103(a).

6. In "Claim Rejections – 35 USC § 103," item 17 on page 17 and item 21 on page 19 of the above-identified Office Action, claims 13, 20, 35, and 42 have been rejected as being unpatentable over WebLogic and Ringseth as applied to claim 1 and 31 above, and further in view of the "Background of the Invention" section appearing on pages 1-3 of the originally filed specification (hereinafter "BOTI").

BOTI was proffered for the teachings of "wherein the one or more declarative annotations cause the compiler to generate a proxy object designed to facilitate interaction by the web service with one of an external web service or client". BOTI does not cure the deficiencies of WebLogic and Ringseth. Accordingly, claims 1, 16, 31, and 38 remain patentable over WebLogic, Ringseth, and BOTI, alone or in combination, for at least the reasons given above. Claims 13, 20, 35, and 42 depend from claims 1, 16, 31, and 38, respectively, incorporating their limitations. Accordingly, claims 13, 20, 35, and 42 are patentable over WebLogic, Ringseth, and BOTI, alone or in combination, under §103(a).

7. In "Claim Rejections – 35 USC § 103," item 18 on page 18 and item 22 on page 19 of the above-identified Office Action, claims 14 and 36 have been rejected as being

unpatentable over WebLogic, Ringseth, and BOTI as applied to claims 13, 20, 35, and 42 above, and further in view of Pagé.

Page was proffered for the teachings of "wherein the one or more declarative annotations further cause the compiler to route asynchronous responses from the external web service to code specified by a developer of the web service". Pagé does not cure the deficiencies of WebLogic, Ringseth, and BOTI. Accordingly, claims 13 and 35 remain patentable over WebLogic, Ringseth, BOTI, and Pagé, alone or in combination, for at least the reasons given above. Claims 14 and 36 depend from claims 13 and 35, incorporating their limitations. Accordingly, claims 14 and 36 are patentable over WebLogic, Ringseth, BOTI, and Pagé, alone or in combination, under §103(a).

8. In "Claim Rejections – 35 USC § 103," item 19 on page 18 and item 23 on page 20 of the above-identified Office Action, claims 15, 21, 37, and 43 have been rejected as being unpatentable over WebLogic, Ringseth, and BOTI as applied to claims 13, 20, 35, and 42 above, and further in view of Monson-Haefel.

Monson-Haefel was proffered for the teachings of "wherein the one or more declarative annotations further cause the compiler to generate a unique identifier to identify a specific conversational instance of the external service". Monson-Haefel does not cure the deficiencies of WebLogic, Ringseth, and BOTI. Accordingly, claims 13, 20, 35, and 42 remain patentable over WebLogic, Ringseth, BOTI, and Monson-Haefel, alone or in combination, for at least the reasons given above. Claims 15, 21, 37, and 43 depend from claims 13, 20, 35, and 42, incorporating their limitations. Accordingly, claim 15, 21, 37, and 43 are patentable over WebLogic, Ringseth, BOTI, and Monson-Haefel, alone or in combination, under §103(a).

Additionally, WebLogic, Ringseth, BOTI, and Monson-Haefel do not teach or suggest the additional elements of claims 15, et seq., namely "wherein the one or more declarative annotations further cause the compiler to generate a unique identifier to identify a specific conversational instance of the external service", as is claimed by claims 15 et seq.

As support for the rejections of claims 15 et seq., the Examiner simply points to Monson-Haefel generally as teaching or suggesting the additional elements. Monson-Haefel does not, however, describe relations between a web service and an external service, much less assigning a unique identifier to a conversion with the external service, by a compiler, in response to declarative annotations. Rather, Monson-Haefel merely describes the behavior of stateful and stateless beans. No mention is made of a conversation identifer for a conversation with an external service. The only identifiers mentioned are identifiers of conversations with clients. Thus, WebLogic, Ringseth, BOTI, and Monson-Haefel simply do not teach or suggest claims 15, 21, 37, and 43, for at least these additional reasons.

CONCLUSION

In view of the foregoing, reconsideration and allowance of claims 1, 3, 6-10, 12-17, 20-22, 31-33, 35-39, and 42-44 are solicited. As a result of the amendments made herein, Applicant submits that claims 1, 3, 6-10, 12-17, 20-22, 31-33, 35-39, and 42-44 are in condition for allowance. Accordingly, a Notice of Allowance if respectfully requested. If the Examiner has any questions concerning the present paper, the Examiner is kindly requested to contact the undersigned at (206) 407-1513. If any fees are due in connection with filing this paper, the Commissioner is authorized to charge the Deposit Account of Schwabe, Williamson and Wyatt, P.C., No. 50-0393.

Respectfully submitted,
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